Before the
Federal Communications Commission
Washington, D.C. 20554

Measuring Competition Effectively

Report of Michael L. Katz

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I. QUALIFICATIONS AND STATEMENT OF ASSIGNMENT

1. My name is Michael L. Katz, and I am the Sarin Professor of Strategy and Leadership at the University of California, Berkeley. I hold a joint appointment in the Haas School of Business Administration and the Department of Economics. I have also served on the faculty of the Department of Economics at Princeton University. I received my A.B. from Harvard University *summa cum laude* and my doctorate from Oxford University. Both degrees are in Economics.

2. I specialize in the economics of industrial organization, which includes the study of antitrust and regulatory policies. I regularly teach courses on microeconomics and business strategy. I am the co-author of a microeconomics textbook, and I have published numerous articles in academic journals and books. I have written academic articles on issues regarding the economics of network industries, systems markets, telecommunications policy, and antitrust enforcement. My curriculum vitae is attached to this report as Attachment 1. It lists all publications that I have authored or co-authored, with the exception of a few letters to the editor on telecommunications and antitrust policy. I am recognized as one of the pioneers in extending the theory of network effects to competitive settings. I am a co-editor of the *Journal of Economics and Management Strategy* and serve on the editorial board of the *California Management Review*.

3. In addition to my academic experience, I have consulted on the application of economic analysis to issues of antitrust and regulatory policy. I have served as a consultant to both the U.S. Department of Justice and the Federal Communications Commission (“Commission”) on issues of antitrust and regulatory policy. I have served as an expert witness before state and federal courts. I have also provided expert testimony before a state regulatory commission and the U.S. Congress.

4. From January 1994 through January 1996, I served as the Chief Economist of the Commission. I participated in the formulation and analysis of policies toward all industries under Commission jurisdiction. As Chief Economist, I oversaw both qualitative and quantitative policy analyses.

5. From September 2001 through January 2003, I served as the Deputy Assistant Attorney General for Economic Analysis at the U.S. Department of Justice. I directed a staff of approximately fifty economists conducting analyses of economic issues arising in both merger and non-merger enforcement. Our principal professional focus was on understanding and projecting the impacts of various business practices and public policy decisions on consumers' economic welfare. My title as Deputy Assistant Attorney General notwithstanding, I am not an attorney.

6. I have been asked by counsel for the Cellular Telecommunications & Internet Association ("CTIA") to address the methodological issues raised by the Commission regarding the assessment of competition in the provision of Commercial Mobile Radio Services ("CMRS").[1] I conclude that the Commission should use an economically sophisticated approach to assessing the state of CMRS competition, but the Commission should not let mechanical application of various analytical tools distort its views. Instead, the Commission should apply sound economics in a way that is, at once, intellectually rigorous, tailored to the issues at hand, and cognizant of practical realities. Moreover, in assessing market conditions and performance, the Commission should take into account the extent to which state and local regulations and fees are distorting competition. This report explains the factual and logical analysis that leads to these conclusions.

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1 *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 and Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, WT Docket No. 04-111, *Notice of Inquiry* (hereafter *NOI*), rel. March 24, 2004.

II. OVERVIEW OF OPINION

7. Briefly, my findings with respect to measuring competition are the following:

- *The concept of effective competition is best understood within the context of specific policy questions.* Markets are rarely perfectly competitive. But they often are competitive enough that extensive government intervention is unwarranted. Therefore, setting an absolute competitive threshold or benchmark in the absence of a specific policy question can be misleading. Setting such a threshold runs the risk of suggesting that intervention is warranted whenever a market fails to attain that benchmark, when, in fact, governmental intervention in even imperfectly competitive markets may harm consumers.
- *The Commission should avoid drawing artificial bright lines in defining product markets. Instead the Commission should recognize that competition can occur along a continuum.* Binary, completely-in-or-completely-out product market definitions can interfere with an accurate assessment of competition, rather than help it.
- *It would be counterproductive to reach a single conclusion about the geographic scope of competition in CMRS markets.* There are both national and local elements of competition. Rather than force the analysis into a single methodological box, the Commission should recognize all of these elements. To do so, the Commission must take into account the strategies by which CMRS providers compete (*e.g.*, national pricing and advertising programs), rather than relying solely on a market definition methodology focused on consumer substitution possibilities.
- *Competition cannot be understood without examining considerably more than concentration.* Although concentration measures often are used to predict the degree of competition, a variety of other factors are relevant, such as the rate of technological progress and the extent to which competing products are close substitutes.
- *In assessing market conditions and market performance, the Commission should take into account the extent to which state and local regulations and fees are distorting competition.* For example, state and local governments levy a variety of direct and indirect taxes on CMRS providers, which raise the costs of providing services and, hence, the prices at which services are sold. The Commission should be especially wary of regulations that constitute “backdoor” price regulation (*e.g.*, attempts to limit the use of early termination fees), which limit and distort competition.
- *The Commission should adopt data collection procedures that provide an accurate picture of the experiences of a broad range of CMRS consumers.* To accomplish this goal, the Commission should collect data covering a wide range of geographic areas. However, it is neither essential, nor even productive, to define hard-and-fast categories such as “rural” and “urban” in advance and in isolation from specific policy questions. Moreover, the Commission should look first to publicly available data.
- *The Commission should recognize that current efforts build on past ones.* The Commission has repeatedly sought and received data over the years and has repeatedly found the CMRS industry to be competitive. This pattern strongly suggests that the Commission should focus on recent developments and changes in market conditions to update its findings rather than risk reinventing the wheel.

8. The remainder of this report explains these conclusions in greater depth and provides details of the facts and analysis that led me to reach them.

III. THE CONCEPT OF EFFECTIVE COMPETITION IS BEST UNDERSTOOD WITHIN THE CONTEXT OF SPECIFIC POLICY QUESTIONS

9. The Commission seeks comment on "what is effective competition?"[2] The Commission also asks "which indicators are useful to determine whether there is effective competition among providers of CMRS"?[3] For the reasons explained below, the concept of effective competition is best understood within the context of specific policy questions.

10. Numerous public policies, including antitrust enforcement and the Telecommunications Act of 1996, promote competition for the benefits it brings to consumers.[4] These benefits typically come in the form of lower prices, greater innovation and variety, or higher product and service quality. The Commission's policies are intended to serve the public interest, and the public interest is a broader concept than are competition and efficiency. However, promoting efficiency through competition is widely recognized as the most effective means to promote overall consumer welfare in most markets. In the presence of vigorous competition, the practical role for government to improve efficiency and consumer economic welfare is very limited except in certain well-defined circumstances.

11. One authoritative economics dictionary defines competition broadly as follows: "Competition is a rivalry between individuals (or groups or nations), and it arises

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2 *Id.*, at 3.

3 *Id.*

4 Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996). The 1996 Act amends the Communications Act of 1934, 47 U.S.C. §§ 151 et. seq.

whenever two or more parties strive for something that all cannot obtain."[5] In economics, competition generally refers to a rivalry among the participants on one side of a market to attract partners from the other side for some sort of economic exchange. Economists also talk about whether a market is "competitive," meaning that there is high degree of rivalry among the sellers and among the buyers.

12. Important features of a competitive market include:

- Sufficiently many participants on each side of the market that a single agent cannot significantly affect the market price.[6]
- Easy entry and exit by new sellers, which tends to create structural conditions conducive to having many participants on the supply side of the market.
- An absence of factors that might otherwise limit consumers' choices, such as a lack of consumer awareness that alternative suppliers are available.

13. There is a set of conditions along these lines that gives rise to a formal model that economists call "perfect competition." In their principles of economics textbook, Professors Nordhaus and Samuelson write "What is meant by perfect competition? It means that all goods and services have a price and are traded on markets. It also means that no firm or consumer is large enough to affect the market price."[7] In contrast, a firm or consumer that can affect the market price is said to have market power. A supplier with a significant level of market power is said to possess monopoly power.

14. It is widely recognized that the conditions necessary for the formal model of perfect competition are rarely satisfied in practice. Instead, real-world markets exhibit

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5 *The New Palgrave: A Dictionary of Economics,* New York, NY: Stockton Press Ltd, 1998, at 531.

6 It should be observed, however, that some markets are highly competitive with just a few participants.

7 Paul A. Samuelson and William D. Nordhaus, *Economics*, Boston, Mass.: Irwin McGraw Hill, 1998, at 35.

varying degrees of imperfect competition. This fact raises the following question: How competitive is competitive enough? Put another way, when is there “effective competition” even if not perfect competition?

15. The answers to these queries cannot be understood in isolation. One must have an underlying policy issue or objective in order to fix a benchmark. For example, one useful question would be the following: When is a market competitive enough that consumers are better served by allowing market forces to operate rather than subjecting suppliers to extensive regulation?[8]

16. There is a consensus among economists that market outcomes generally possess desirable characteristics barring certain so-called *market failures*. While there is more than one possible taxonomy, a useful one is that market failures can arise from: (a) significant market power; (b) externalities, or missing markets; and (c) asymmetric information. There is also a consensus among economists that market outcomes are not necessarily fair. A common response is to call for a division of labor in policies under which economy-wide tax schemes are used to redistribute income, and market-specific governmental intervention is limited to correcting market failures or ameliorating their effects.

17. It is critical to economically sound policy-making to recognize that the fact that a market may work imperfectly due to one or more of the market failures listed above does *not* imply that regulation is desirable. Like competition, regulation is never perfect. Economists generally believe that the costs and benefits of intervention must be carefully

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[8] Of course, some degree of governmental intervention is almost always needed. There is a consensus among economists that government intervention is fundamental to the existence of well-functioning markets. Governments define property rights and enforce contracts, which greatly facilitate private commercial activity. This type of intervention is very different than what is typically meant by “regulation” in discussions of telecommunications policy.

assessed and compared before any decision is made to regulate. In part, this view reflects concern that government intervention may worsen market performance, in addition to generating administrative costs. Economic welfare depends on the net effects of policy intervention, which is the difference between benefits and costs. By definition, if the benefits of a policy exceed the costs, that policy improves efficiency.

18. In deciding whether a market is "effectively competitive," the Commission should ask whether, given the structure and performance of the market, the expected benefits of pervasive government regulation would be positive. If the answer is "no," then the market is effectively competitive and regulation is unwarranted. Past Commission analyses of competition demonstrate that CMRS markets generally are effectively competitive in this sense and that extensive regulation of prices and the terms and conditions of service are unlikely to benefit consumers.[9]

IV. MARKET DEFINITION

19. There is a standard process used to assess competition. This process begins with market definition and then examines structural characteristics of the relevant markets as well as various performance measures. The present section discusses market definition. The analysis of market structure is discussed in the section that follows.

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[9] *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Eighth Report*, 18 FCC Rcd. 14783 (2003) ("*Eighth Competition Report*"); *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Seventh Report*, 17 FCC Rcd 12985 (2002) ("*Seventh Competition Report*"); and *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Sixth Report*, 16 FCC Rcd 13350 (2001) ("*Sixth Competition Report*").

A. Goals and Methods of Market Definition

20. In order to assess fully the effectiveness of competition, one must develop a sense of the nature of competition among suppliers and of the competing products. One might refer to any process for identifying rivals and the scope of competition as a process of defining or delineating relevant markets. However, economists often use the terms ‘market delineation’ and ‘market definition’ to refer to a more formal process of explicitly identifying the boundaries of one or more markets.

21. Relevant markets are defined along two dimensions: the scope of the products included and the geographic scope. A fundamental principle by which economists define the product scope of a market is to include two goods or services in the same relevant market if consumers view them as sufficiently close substitutes and not to include them in the same relevant market if consumers do not view them as sufficiently close substitutes. There are, of course, varying degrees of substitution and competition among products. To some extent, chocolates compete with automobiles for consumers’ dollars, but one should not conclude that chocolates and automobiles are in the same product market.

22. As Professor Jean Tirole stated in his well-known industrial organization textbook, “There is no simple recipe for defining a market.”[10] One method is to examine the extent to which there is “reasonable interchangeability of use” between two products.”[11] That is, to ask whether, as a practical matter, customers can substitute one product for the other. If the answer is yes, then the products are in the same relevant market. The key to this approach is that, if two goods or services are reasonably interchangeable in this sense,

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[10] Jean Tirole, *The Theory of Industrial Organization*, Cambridge, MA: The MIT Press, 1993, at 12.

[11] This approach to market delineation has frequently been applied by courts. Examples include *United States v. Baker Hughes In. 731 F. Supp. 3, 7 (D.D.C.)* and *F.T.C. v. R.R. Donnelley & Sons Co.,1990-92 Trade Cas. (CCH)***.**

then suppliers of those goods and services will compete with one another to meet customer demands for them.

23. An alternative means for defining a relevant market is to conduct a "hypothetical monopolist" test. This test asks whether a hypothetical, profit-maximizing monopolist over a group of products would profitably raise price above the prevailing level by a 'small but significant' amount for a sustained period of time. The group of products considered in the test is a candidate relevant market. The smallest group of products that satisfies the test constitutes a relevant market. This is the underlying approach often used by the United States Department of Justice and the Federal Trade Commission, as described in the *Horizontal Merger Guidelines.*[12] I say "often," because there are well-known flaws in the process and the agencies sometimes do not strictly apply the *Merger Guidelines* process. Mechanical application of the hypothetical monopolist test can lead to overly narrow market definitions that give a misleading picture of the state of competition.

24. A small but significant increase in price above the current level will raise a hypothetical monopolist's profits unless unit sales volume falls sufficiently to offset the higher price received for units sold. Thus, a set of products constitutes a relevant market if a small but significant and non-transitory increase in price would lead to too little substitution to goods outside of the candidate market to make the price increase unprofitable for a hypothetical monopolist. Under either the functional substitutes or hypothetical monopolist approaches to market definition, substitution possibilities are the key.

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[12] U.S. Department of Justice & Federal Trade Commission, *Horizontal Merger Guidelines* (rev. ed. April 8, 1997) (hereafter, *Merger Guidelines*), §§1.0 and 1.11, available at http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html, site visited April 26, 2004.

25. It is critical to keep in mind that formal market delineation is a tool of analysis, not an independent end in itself. Hence, in order to define relevant markets sensibly, one must keep in mind the use to which the definitions will be put. One way to use market delineation is to determine how wide to cast the net when identifying the suppliers to be explicitly considered in projecting the likely effects of a public policy or a commercial transaction, such as a merger. A second way to use market definition is to provide the boundaries used to compute market shares, which in some circumstances can be used as indicators of the nature of competition and the likely competitive effects of a proposed policy or transaction. In either case, the purpose of market definition is to put structure on the analysis of competition.

26. In asking whether a price increase would be profitable, the hypothetical monopolist test assumes that suppliers form a perfect cartel or there is a merger of all firms in the market. In reality, no cartel is perfect, and most mergers are not mergers to monopoly. The importance of this observation is twofold. First, the hypothetical monopolist test does not identify the extent to which suppliers in the candidate market are able to sustain supra-competitive prices, if at all. Second, the answer to the question of whether suppliers can sustain supra-competitive prices may depend, in part, on competition from products that lie outside the boundaries identified by the hypothetical monopolist test. In other words, excluding products that lie outside a relevant market determined through application of the hypothetical monopolist test may lead one to project harm to competition and consumers where there isn't any. An over-reliance on specific mechanics of market definition can thus be an obstacle to good analysis and can lead to seriously misleading conclusions.

B. The Commission should Avoid Drawing Artificial Bright Lines in Defining Product Markets

27. In using market delineation either to identify competitors or compute market shares, the Commission should take care not to put too much weight on specific market boundaries or specific calculations of market shares. Market boundaries often are not bright lines, and the binary, 0-1 distinctions inherent in market delineation—whereby a firm is either 100 percent in a market or 100 percent out of it—can lead to poor representations of reality. For example, to some degree, unlicensed wireless data networks compete with CMRS networks, and for some policy questions it would be misleading to ignore this competition. Instead of always drawing bright lines, the Commission should recognize that competition can occur along a continuum in some cases.

C. It would be Counterproductive to reach a Single Conclusion about the Geographic Scope of Competition

28. As with product-market definition, a central approach to geographic market definition is to include products available at two locations in the same relevant market if they are viewed by consumers as being substitutes for one another, and to place them in separate markets if consumers do not view them as substitutes. In conducting a sound economic analysis, it is critical to recognize that the scope of competition need not coincide with the market definition reached through application of the principle above. Specifically, even if one defines local markets based on the consumer-substitution methodology, there are central elements of service providers' competitive strategies and marketplace behavior that create national linkages. Consequently, conducting a competitive analysis solely at a local level would be misleading.

29. Consider geographic market definition as determined by application of the hypothetical monopolist test. An interesting element of CMRS is that the service providers have fixed locations, but the majority of their customers make use of the services on a mobile or nomadic basis. Consequently, a consumer is interested in a CMRS provider's coverage area. This interest gives rise to both national and local elements of competition. Consider, first, the local elements. For most consumers residing in Washington, D.C., a PCS provider offering excellent coverage in Los Angeles but none in Washington, D.C. offers a very poor substitute for a provider offering broad coverage of the Washington, D.C. metropolitan area. By itself, this fact suggests that application of the hypothetical monopolist test would lead to the conclusion that markets are local when defined solely from the perspective of consumer substitution possibilities. Such an analysis, however, would be incomplete. Wireless service providers often find it more effective and efficient to pursue national pricing and advertising strategies and to sell uniform service offerings on a national basis. Consider the implications of the hypothetical monopolist test. If the hypothetical monopolist controlled a sufficient range of service providers in only one local area, that monopolist might find it profitable to raise prices, indicating a local scope to the relevant geographic market. But consider a hypothetical monopolist controlling a set of services on a national basis. If the costs associated with setting different prices in different geographic areas were high enough, then the hypothetical monopolist would not find it profitable to raise prices in one local area in isolation. This interpretation of the hypothetical monopolist test would indicate a national geographic market scope. One can debate which approach is the "correct" application of the hypothetical monopolist test. But rather than wrestle with the intricacies

of market definition mechanics, the Commission should focus on the nature of competition.

30. Competition clearly has important national dimensions. First, many consumers desire to make use of CMRS services in a range of locations. For example, someone living in Washington, D.C. may be keenly interested in whether a mobile voice service offers good coverage of Washington State, as well as Washington, D.C. Thus, important dimensions of competition among CMRS providers include the degree of nationwide coverage and the associated service prices. Second, for the reasons given above, many CMRS providers pursue national pricing and marketing strategies. These national strategies can bring the benefits of competition in one geographic area to consumers in another. This sort of effect may be particularly pronounced in the case of rural areas. Thus, in assessing the extent of competition in a given locality, the Commission should take into account the effects of national pricing strategies and other marketplace behavior. A recent survey submitted to the Commission in a different proceeding, for example, indicates that the national elements of competition are strong and bring benefits to rural consumers who may have relatively few facilities-based service providers from which to choose.[13] The central implication of these facts is that, even if one concludes that the hypothetical monopolist test gives rise to local markets, it does not follow that local markets are the appropriate level for analyzing competitive conditions; national considerations should be taken into account.

31. Lastly, it should be noted that competition can flow from local considerations to national ones. For example, depending on a subscriber's calling preferences, a regional

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[13] Declaration of Richard J. Gilbert, in the matter of *Application for the Transfer of Control of Licenses and Authorizations from AT&T Wireless Services, Inc., and Its Subsidiaries to Cingular Wireless Corporation*, March 17, 2004, ¶¶ 59-61 and Appendix.

rate plan may be a very good substitute for a rate plan with national coverage and a single national rate.

V. STRUCTURAL CHARACTERISTICS

32. A variety of a market's structural characteristics can affect how the market performs. Concentration is one of the most commonly examined characteristics, but: (a) there are a number of problems that can arise from excessive reliance on mechanical concentration calculations, and (b) there are other market characteristics that are relevant to competition. In order to obtain an accurate view of competition, the Commission should examine a range of market concentration measures and other market characteristics. The Commission should also tailor its use of these measures to the specific policy questions at hand. Lastly, in addition to examining structural characteristics, the Commission should consider direct measures of market performance.

A. The Use of Concentration to Measure Competition

33. Once a market has been delineated, one can identify the suppliers participating in that market and develop a measure or measures of market shares and then market concentration. Several notes of caution should be sounded with respect to the use of concentration measures to assess competitive conditions. First, the problems inherent in drawing artificial bright lines in defining relevant markets give rise to similar problems in computing the resulting market shares. Second, there are multiple ways to measure market shares (*e.g.*, share of traffic volume, share of capacity, and share of subscribers). Moreover, there are issues of whether one should look at the shares of customer flows (*e.g.*, the percentage of new or shifting customers that a CMRS provider attracts in a given time period) or stocks (*e.g.*, shares measured in terms of installed bases of customers).

Further, there are multiple ways to combine market share data into scalar measures of concentration (*e.g.*, the C-n measure[14] and the Herfindahl-Hirschman Index[15]).

34. In order to generate sensible assessments of competition, the measurement and analysis of market shares and concentration should always be tied to a coherent theory of industry behavior that fits the facts of the industry under consideration.[16] As a matter of economics, there is no all-purpose theory that relates the strength and nature of competition to market shares and concentration. Attempts to apply a one-size-fits-all approach to analysis of market shares and concentration will lead to serious mistakes in an economic environment as complex as that of the CMRS industry.

35. These points can be illustrated by considering the use of market share data to assess the significance of past and potential entry. Because they reflect historical sales patterns, in addition to current ones, subscriber shares may tend to understate the competitive significance of newer entrants. Moreover, with the implementation of wireless local number portability, consumer switching costs are reduced and customer installed bases are less valuable measures of competitive positions. Thus, in this example, a more accurate picture of competition might be obtained by considering a service provider's share of customers who are either new to the industry or recently switched among carriers. This point is not limited to the use of shares of subscriber counts. A similar logic would apply to the use of shares of total revenues in comparison with shares of revenues derived from customers who are new to the industry or have recently switched service providers. Turning to yet another measure, the usefulness of spectrum shares as a

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[14] This measure is calculated by summing the market shares of the n largest suppliers in a market.

[15] This measure is calculated by summing the squares of the market shares of all individual suppliers in a market.

measure of market concentration depends on the degree to which such shares provide good projections of suppliers' actual or potential capacities. The degree to which spectrum shares play this role depends, in turn and in part, on the extent to which there is an active market for spectrum and on the nature of various technological options to increase capacity.

36. Consideration of capacity data as measures of suppliers' abilities to compete leads to one more potential measure of concentration. Under some conditions, it can be appropriate to measure concentration by counting service providers and treating all of them as being of equal competitive significance, regardless of the data concerning various shares of customers or revenues. These conditions are satisfied when each service provider is equally able to compete for new business, there is little product differentiation, and consumers' costs of switching among service providers are low.

37. Lastly, the economically appropriate treatment of resellers for purposes of determining market shares and concentration will depend on the exact policy questions being asked.

B. A Complete Assessment of Competition Must Look beyond Concentration Measures

38. Even if one has a coherent theory of why market shares and concentration are informative measures of competition and market power, the analysis of competition is not complete. As the *Merger Guidelines* recognize, "market share and concentration data provide only the starting point for analyzing the competitive impact of a merger."[17] A similar conclusion holds for the use of market share and concentration data to assess

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[16] Under the process described by the *Merger Guidelines,* "Market shares will be calculated using the best indicator of firms' future competitive significance." *Merger Guidelines,* §1.41.

[17] *Merger Guidelines,* §2.0.

competition in other settings as well. This conclusion is particularly relevant in markets in which shares fluctuate significantly, calling into question the degree to which static market share measures can serve as meaningful measures of suppliers' competitive positions. Similarly, a high degree of customer switching among carriers calls into question of the significance of market shares, even if overall market shares are relatively stable.

39. A complete competitive analysis must look beyond market share data to examine structural characteristics, such as the sophistication of buyers and the conditions of entry.[18] In CMRS markets, for example, rapidly changing prices due to substantial innovation and investment, as well as the multi-dimensional nature of service offerings (*e.g.,* "free" minutes, peak and off-peak prices, roaming charges, handset subsidies, and vertical services), create conditions that promote competition rather than coordinated pricing.

VI. THE COMMISSION SHOULD COLLECT DATA ON THE EFFECTS OF STATE AND LOCAL POLICIES ON CMRS COMPETITION

40. A variety of state and local policies raise the costs of wireless services by imposing taxes, fees, and regulatory burdens. The prices that consumers pay are increased, and competition is weakened and distorted, by regulatory policies that raise wireless costs or create artificial competitive advantages for competing transmission technologies. These policies adversely affect the incentives for firms to invest in continued service capabilities and cost reductions.

41. The fees, taxes, and other assessments levied by state and local governments on the wireless industry take many forms. Included among these charges are state and local corporate income taxes, property taxes, recording and transfer fees, franchise taxes, lease taxes, incorporation registration fees, E-9-1-1 fees, right-of-way fees, and antenna/permit

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[18] In a merger context, see *Merger Guidelines,* §§2 and 3.

fees. The variety of state and local taxes and other assessments applied to wireless services can easily claim more than 20 percent of the carrier's annual intrastate revenues.[19]

42. It should also be remembered that these state and local burdens are in addition to various federal taxes and obligations imposed on CMRS providers. Together, the lengthy list of local, state, and federal taxes and other assessments that wireless carriers face sum to a substantial burden that ultimately raises prices to consumers.

43. These distortions and the attendant harm to consumer welfare arise for two reasons. First, taxes and fees push prices further above incremental costs and suppress demand, artificially reducing the use of wireless services. This reduced service use is inefficient: when prices exceed incremental costs, there are consumers who choose not to use wireless services even though they value these services at more than their incremental cost. Second, taxes and fees may violate the principle of competitive neutrality. Some taxes and fees are inherently discriminatory, favoring wireline providers over wireless ones. In part this is because some of these taxes were designed and intended for monopoly local exchange carriers and reflect wireline service concepts and methods. It should not be surprising, therefore, that such taxes can be inappropriate when applied to competitive wireless services. And even where taxation is appropriate, its implementation can fail to be technology neutral.

44. In addition to the costs and distortions caused by specific state and local policies, a patchwork of varying regulations across the country can be costly because it raises compliance costs and because there may be distortions between national and more

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19 *See* Michael L. Katz and John B. Hayes, "Unintended Consequences: Public Policy and Wireless Competition," 1 October 1998, pp. 20-29 (report prepared at the request of the Personal Communications Industry Association). See also Allan T. Ingraham and J. Gregory Sidak, "Do States Tax Wireless Services Inefficiently? Evidence on the Price Elasticity of Demand," April

regionally or locally focused providers. For example, the California Public Utilities Commission is currently considering whether to adopt California-specific privacy rules governing the use of certain customer data that differ significantly from the Commission's privacy rules. Creating distinct rules for California will increase the costs of service for carriers that operate on a multi-state or national basis.

45. Some regulatory policies can harm the competitive process itself. For example, a policy limiting the use of early termination fees would—in terms of its economic effects—amount to backdoor price regulation that would limit the workings of competition itself and would undermine long-term contracting.[20] Similarly, a policy imposing a mandatory 30-day trial service period (*e.g.*, a mandatory rescission period) would dictate to firms how to behave along a dimension of behavior that would otherwise be driven by consumer preferences and market forces, and might indeed serve as a source of competitive differentiation among service providers.[21]

46. Economists are in broad agreement that poorly conceived taxes and regulations can significantly harm consumer welfare and competition, and the CMRS industry is no exception to this general rule.[22] The Commission should monitor state and local

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2004, Table 5, available at http://ssrn.com/abstract=525523, site visited April 26, 2004.

[20] One likely consequence of undermining long-term contracts is that carriers would no longer subsidize handsets and might charge their customers relatively large set-up fees to cover account start-up costs.

[21] In September, 2003, the wireless industry announced a ten-point voluntary code of conduct (the CTIA Consumer Code for Wireless Service), which has been adopted by the six largest leading wireless service providers as well as others. That code includes a commitment to trial periods of at least 14 days. Some carriers, however, have chosen to offer longer periods as one element of their competitive strategies. (Information about the Consumer Code for Wireless Service and the carriers that have adopted it is available at http://www.wow-com.com/consumer/issues/articles.cfm?id=1295.)

[22] *See* Jerry Hausman, "Efficiency Effects on the U.S. Economy from Wireless Taxation," 53 *National Tax Journal* 733, 739 (2000), and Allan T. Ingraham and J. Gregory Sidak, "Do States Tax Wireless Services Inefficiently? Evidence on the Price Elasticity of Demand," April 2004 http://ssrn.com/abstract=525523.

regulation of CMRS and assess its effects on competition and consumers. The Commission should pay particular attention to creeping regulation of terms and conditions, as these rules can quickly become an especially inefficient form of price regulation.

VII. THE COMMISSION SHOULD COLLECT DATA THAT PROVIDE AN ACCURATE PICTURE OF THE EXPERIENCES OF A BROAD RANGE OF CMRS CONSUMERS

47. The Commission has requested comment on whether the metrics used to assess performance in the CMRS industry vary between urban and rural areas and whether market performance varies across rural and urban areas.[23] It further states that "In order to analyze the mobile telecommunications market structure in rural areas, it is necessary first to define 'rural areas.'"[24] I offer the following observations and comments on these questions.

48. At the outset, it is important to recognize, as the Commission has, that rural consumers are benefiting from competitively supplied CMRS.[25] As service areas further expand, rural consumers will gain additional benefits. According to CTIA analysis, 98 percent of Americans can now choose among three or more carriers, 93 percent can choose among four or more carriers, 83 percent can choose among five or more carriers, and 66 percent can choose among six or more carriers.[26] Even in those areas served by fewer carriers, however, rural consumers benefit from competition in more densely populated areas. For a variety of reasons, carriers are inclined to offer the same national

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23 *NOI*, at ¶ 3.

24 *NOI*, at ¶ 12.

25 *Eighth Competition Report*, at ¶¶ 12-13.

26 CTIA data to be reported in "Wireless Industry Indices: Semi-Annual Data Survey Results" (results through December 2003) to be published May 2004.

pricing plans in all of their local service areas.[27] Rural consumers thereby benefit from competition in urban service areas. Moreover, the fact that entry does not occur more rapidly in rural areas provides one indication that incumbents are setting prices that are low relative to the costs of providing service in those areas.[28] In any event, the fact that there may be fewer carriers offering services in regions with less dense populations should not be read as a sign of market failure. Indeed, this pattern may instead reflect the fact that competition is working to drive prices toward costs.

49. From the perspective of economic analysis, the Commission should adopt sampling and data collection procedures that provide an accurate picture of the experiences of a broad range of CMRS consumers. To accomplish this goal, the Commission should collect data covering a wide range of geographic areas. However, for the purpose of conducting sound economic analysis, it is neither essential nor productive to define hard-and-fast categories such as "rural" and "urban" in advance and in isolation from specific policy questions.

50. The issue of data collection raises the question of whether the Commission should impose additional filing requirements on CMRS providers. In choosing whether to impose new requirements, the Commission should determine what data it already has collected and whether additional relevant data already are available from public sources, such as carrier web sites. Reliance on public sources has a number of advantages. The use of publicly available data allows the Commission to sample those data on a flexible and ongoing basis tailored to specific policy questions. In contrast, the use of mandatory,

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27 *See* Declaration of Richard J. Gilbert, in the matter of *Application for the Transfer of Control of Licenses and Authorizations from AT&T Wireless Services, Inc., and Its Subsidiaries to Cingular Wireless Corporation*, March 17, 2004, ¶ 84 and Appendix.

28 The exact relationship between prices and costs depends on the size of economies of scale and density relative to market demand in these areas.

periodic reports generated solely for Commission purposes will almost certainly engender lags, service provider costs, and service provider confusion regarding exactly how to measure and report various requested data. Mandating the provision of data also runs the risk of exposing proprietary data in ways that are harmful to competition and consumers (*e.g.*, carriers may be reluctant to make certain competitive moves if they are forced to disclose them to rivals).

VIII. CONCLUSION

51. The Commission has requested a substantial amount of data, and it is important that the Commission make appropriate use of these data. The discussion above indicates some of what can go wrong with simplistic analysis and, thus, this discussion indicates the need for sophisticated analysis. That said, the Commission has repeatedly sought and received data over the years, and the Commission has repeatedly found the CMRS industry to be competitive. This pattern strongly suggests that—at least in answering the broad questions that underlie CMRS competition reports—it would be useful for the Commission to focus on recent developments and changes in market conditions to update its findings rather than risk reinventing the wheel each year.

52. The Commission should also focus its data collection efforts on understanding the extent to which state and local regulations and fees are distorting competition. State and local governments levy a variety of direct and indirect taxes on CMRS providers, which raise the costs of providing services and, hence, the prices at which services are sold. And the Commission should be especially wary of regulations that constitute "backdoor" price regulation, which limit and distort competition.

53. Based on the experience of past reports, there are good reasons to expect that the data will show CMRS markets are sufficiently competitive that they serve consumer

interests very effectively. Imposing costly obligations on competitive firms will distort competition and harm consumers. The implication is that government regulation should be very limited and, where there is regulation, it should be specifically targeted and should not create unfounded obligations by service providers. Doing otherwise will generate costly distortions of competition that harm consumers rather than help them.